

# NOAA and OAR Approaches to Research Planning

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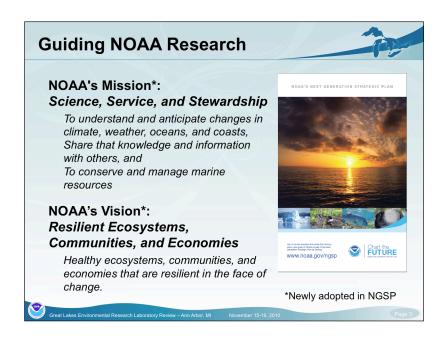
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## NOAA Research Science Reviews



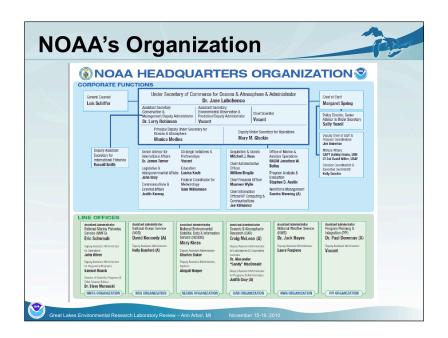
- Conducted every four years to evaluate the <u>quality</u>, <u>relevance</u>, and <u>performance</u> of research and development in OAR labs
  - Last GLERL Review December 2000
- Assist in strategically positioning the lab for planning future science
- Intended to ensure that research is preeminent and linked to the NOAA Strategic Plan
- The Review Panel is asked to evaluate each science area based on specific questions within the Charge to the Review Panel

Only the review team is allowed to ask questions during the presentation period. Observers are asked to hold their questions and ask the scientists during the breaks.

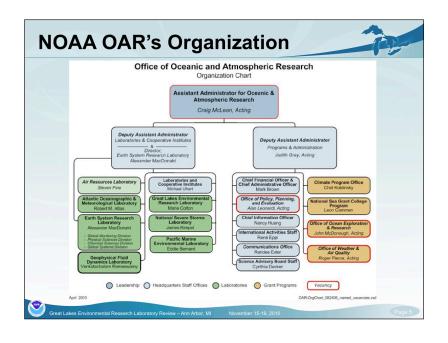


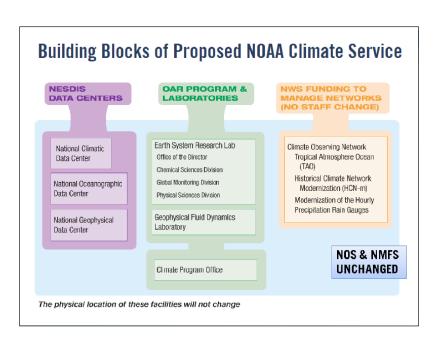
Main Message: NOAA's mission, services, and vision for the future require preeminent research that provides new insights, innovations and technological breakthroughs.

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Overall structure of NOAA. NOAA HQ Line Office Structure







Main Message: Preeminent research is at the center of all NOAA Services.

**OAR Vision:** A society that uses the results of our research as the scientific basis for more productive and harmonious relationships between humans and the environment. (per OAR FY 2005 - FY 2010 Strategic Plan)

OAR Mission: To conduct environmental research, provide scientific information and research leadership, and transfer research into products and services to help NOAA meet the evolving economic, social, and environmental needs of the Nation. (per OAR FY 2005 - FY 2010 Strategic Plan)

•Our role is to provide unbiased science to better manage the environment, nationally and globally. Our role within NOAA is to provide products and services that describe and predict changes in the environment.

•Research results allow decision makers to make effective judgments in order to prevent the loss of human life and conserve and manage natural resources while maintaining a strong economy.

**NOAA's Changing Strategic Directions** 2000 - 2008 2008 - Future Ocean Commission **National Ocean Policy Blueprint Next Generation** NOAA Strategic Plan Strategic Plan 20 Year Vision **Climate Service** NOAA 5 Year Research **OAR Restructuring** Plan Creation of: **NOAA SAB NOAA Science Workshop** and Grand Challenges **NOAA Research Council** Four Revised Mission Goals Five Strategic Mission Goals **Matrix Program Structure** 

NOAA has undergone a significant period of change over the last decade.

Note GLERL's last lab review was held in December 2000 at the initiation of this period of change. The review will cover GLERL's research under the requirements and drivers between 2000-2010.



Main Message: NOAA Research is responsive to a variety of external policy and legislative drivers.

Focus on NOAA OAR drivers as a whole. Marie will talk about drivers in relation to GLERL.



NOAA's mission is to understand and predict changes in the Earth's environment and conserve and manage coastal and marine resources to meet our Nation's economic, social, and environmental need. NOAA Research is essential for meeting our interdisciplinary mission goals. NOAA's Mission Goals:

- •To Protect, Restore, and Manage the Use of Coastal and Ocean Resources through an Ecosystem Approach to Management,
- •To Understand Climate Variability and Change to Enhance Society's Ability to Plan and Respond,
  •To Serve Society's Needs for Weather and Water Information, and
- •To Support the Nation's Commerce with Information for Safe, Efficient, and Environmentally Sound **Transportation**.
- GLERL has participated in the Weather & Water Goal and the Ecosystems Goal through the Integrated Water Forecasting and Ecosystem Research Programs

In addition to the four thematic mission goals, NOAA also recognizes the inherent need for support. This is capture in the Mission Support Goal which has four sub goals: Satellite, Fleet, Modeling and Observations Infrastructure, and Leadership and Acquisition.

NOAA is essentially an **operational ecosystem science agency** with global activities on land and sea, in the air and in space. NOAA **relies on science partnerships** to achieve our mission. NOAA partnerships span academic and industry sectors as well as other government agencies. These critical relationships improve relations with our customers, build reliable interconnected data sources, and **support NOAA's mission**.

#### NOAA 5-Yr Research Plan (FY 08-12)



Emphasizes the integration of the observational, experimental, analytical, and modeling tools that are the core of NOAA's research

- Identifies specific research <u>milestones and objectives</u> to reach our Strategic Plan Goals and Objectives,
- Encourages transformational research, and
- Based on societal needs

Developed by NOAA Research Council

 Input from NOAA line offices and mission goals, external partners, along with public commentary



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### NOAA 5-Yr Research Plan (FY 08-12)



### **Overarching Research Questions**

What factors influence ecosystem processes and ... forecasts [of] their future state?

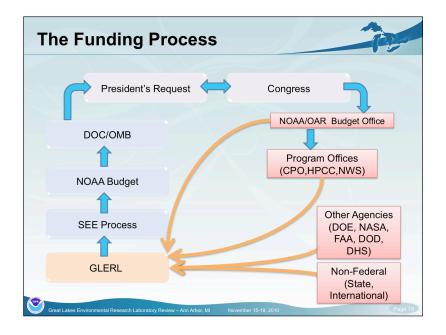
What is the current state of biodiversity in the oceans, and what impacts will external forces have on this diversity...?

What improvements to observing systems, analysis approaches and models will allow [lead] us to better predict[ions] ...?

How are uncertainties ... best estimated and communicated?

How can the ... warning times for ... high-impact environmental events be increased significantly?





- •Priority setting for research occurs at each phase to varying degree.
- •The full process ensures that only the best and most relevant priorities survive the process and are funded
- •GLERL supports priority setting at the PPBES, NOAA Budget and DOC/OMB levels
- •Input is given through budget narratives, associated Q&A and the Presidents Budget Request by supporting the budget rollout.



NOAA Science Workshop Challenges

Acquire and incorporate knowledge of human behavior to enhance our understanding of the interaction between human activities and the Earth system

- Understand and quantify the interactions between atmospheric composition and climate variations and change
- · Understand and characterize the role of the oceans in climate change and variability and the effects of climate change on the ocean and coasts
- Assess and understand the roles of ecosystem processes and biodiversity in sustaining ecosystem services
- Improve understanding and predictions of the water cycle at global to local scales
- Develop and evaluate approaches to substantially reduce environmental degradation
- Sustain and enhance atmosphere-ocean-land-biology and human observing systems Cross Cutting Challenges
- Characterize the uncertainties associated with scientific information
- · Communicate scientific information and its associated uncertainties accurately and effectively to policy makers, the media, and the public at large.



NOTE that these science challenges were subsequently incorporated into the NOAA Next Generation Strategic Plan.

Introduce the NGSP as the new guidance for aligning NOAA mission goals and planning structure.

Recommendations

Develop strategic and implementation plans that are realistic given financial constraints

Develop a facilities management plan

Plan for future hiring and staffing decisions focused on lab research priorities

Develop a transparent mechanism for awarding excellence

Enhance the dissemination of GLERL research to the public

Secure and maintain a high quality research vessel for field operations

Increase productivity in research publications



Main Message: We are committed to conducting and sponsoring preeminent research, providing maximum value to society, all within a culture of transparency.

Thank reviewers for participating... Introduce Marie Colton?